

## MS. RAMIREZ'S CLASS AT THE WATER TABLE

**Key Focus:** Science

**Observation:** February 3, 10:00-10:05 a.m. Water table filled with different size and shape cups and balls with different weights [five children].



Maria pours water from a large cup into a small cup. She continues to pour after the small cup is filled up. Once the large cup is empty she refills and repeats the process.

Juana looks for a while at the different cups. She selects a large square cup and a large round cup and pours the water from the square to the round cup, stopping when the round cup is full, and then looks at how much is left in the square cup when the round one is full.

Rita picks up a small cup without a handle and it slips from her hand when she tries to scoop up some water. She then takes a cup with a large handle and is able to scoop up the water.

Natalia puts a hollow ball on the water and watches it float. She pushes it down and watches how it bobs to the surface.

Timothy watches what Natalia does and then takes another ball and puts it in the water. The ball sinks to the bottom of the water. He says to Natalia, "Look at mine." Natalia looks at Timothy's ball and tells him, "Let me try yours. You take mine." They hand each other their balls with smiles on their faces.

**Reflecting on the documentation:**

*\*Participants may quickly shift from reflecting on the documentation to interpreting the observation or suggesting strategies for extending learning. Remind participants to discuss the advantages and disadvantages of the documentation technique.*

**Ask:** Underline/identify the portions of this anecdotal record that are not objective.

**Sample Responses:** This entire anecdote is written objectively except, for "looks at how much is left," which makes an assumption about what Juana was thinking. Participants might want to find more objective words, perhaps just "looks at the square cup."

**Ask:** What are the advantages of including a context sketch in this observation?

**Sample Responses:** The opening provides detail as to when the activity took place, for what duration of time, who was present, and their position, and lets us know that many of the interactions that occurred were pre-planned by the teacher (for example, placing differently weighted balls and different sizes and shapes of cups in the water table allows for a more guided interaction). Letting us know that Timothy and Natalia were

standing next to one another helps shed light on how that interaction might have occurred.

Interpretation of the observation:

*\*Remind participants that in their interpretation they are looking for patterns, critical incidents, or errors. It is important to stick to the data.*

**Ask:** What can you learn about the children from these observations?

**Sample Responses:**

- Timothy and Natalia interact with their own materials, yet observe the properties of the materials of their neighbor. They both observe that their balls have different properties and seem eager to share and test the differences. Natalia and Timothy are beginning to show awareness of changes in materials and perhaps cause-effect relationships. Natalia and Timothy demonstrate give-and-take interactions and take turns using materials. Natalia and Timothy are using language to communicate information and observations.
- Maria and Juana both seem to be observing differences in volume, as evidenced by their interest in pouring using containers of different shapes and sizes, though it could be just sensory-motor play for Maria, and Juana could be observing how the water takes the shape of the container.
- The materials offer all the children the opportunity to compare and contrast objects, increase awareness, and begin understanding changes in materials and cause-effect relationships. Children are practicing hand-eye coordination as they manipulate slippery objects.
- Rita appears to have difficulty at first with grasping a cup, but is better able to hold a cup with a handle. She changes her strategy without assistance from peers or adults. This observation may lead to some other questions and hypotheses, such as: Does she have trouble holding other objects of that size? Was the cup slippery when wet? What is her fine motor coordination like when she picks up markers and crayons? Often the things that are difficult for children provide a lot of information about where they need additional support or teaching.

Relating your observation to the Child Outcomes Framework:

*\*Although participants can defend other interpretations, there should be general consensus that this observation demonstrates:*

**4B4 (Science/Scientific Knowledge):** Shows increased awareness and beginning understanding of changes in materials and cause-effect relationships.

**1B1 (Language Development/Speaking and Communicating):** Develops increasing abilities to understand and use language to communicate information, experiences, ideas, feelings, opinions, needs, and questions, and for other varied purposes.

**6C3 (Social and Emotional Development/Cooperation):** Develops increasing abilities to give and take in interactions, to take turns in games or using materials, and to interact without being overly submissive or directive.

**7C3 (Approaches to Learning/Reasoning and Problem Solving):** Develops increasing abilities to classify, compare, and contrast objects, events, and experiences.

**8A2 (Physical Development/Fine Motor Skills):** Grows in hand-eye coordination in building with blocks, putting together puzzles, reproducing shapes and patterns, stringing beads, and using scissors.

Next steps for large group instruction:

*\*Help participants make connections between what they learn from the assessment and the next steps they want to take in instruction. If suggestions for instruction extend activities to new areas of learning, ask participants to consider what aspects of children's progress they would assess and how they would do so during those extension activities.*

**Ask:** What would you recommend that the teacher do next for the class as a whole?

*\*Responses will vary but might include:*

- To extend the scientific reasoning, bring the water table (or a large clear tub filled with water) to large group and conduct an experiment in which three balls of different density respond differently to the water, and another in which some clay can be made into a boat that floats or compacted into a dense ball that sinks. Bring a scale and ask children to make predictions about what will float or sink. Create a chart to document what floats and what sinks. Provide words to describe what is happening if children are not able to talk about it.
- Experiment with conservation of water tasks. Show children a tall, narrow container and a shallow, wide container. Pour water into the tall, narrow container. Then pour the water from the narrow container into the shallow, wide container. Ask children whether the shallow, wide container has more or less water or the same amount as the tall, narrow container had. Talk about the meaning of tall, short, wide, narrow, more, less, overflow. Discuss. You could then assess who knew the meaning of those words by asking them to point to the one that is narrow, short, etc.

Next steps for individualized instruction:

**Ask:** What would you recommend that the teacher do next for individual children?

**To Maria:** “What happens if you stop pouring when the small container is full? Let’s try it. Is there more water left in the big container?” Later, set up an activity to see if Maria understands that one container can hold more water than the other.

**To Juana:** “What happens when you pour the water from the round cup to the square cup?” Have her make a prediction about what will happen with containers that have other shapes as well such as a triangle or a star.

**To Rita:** Set up activities to help her practice manipulating objects of different sizes and shapes.

**To Timothy and Natalia:** “Why do you think one ball floats while the other sinks?” How are the balls different? See if they can make a clay ball float. Or extend the activity by having them complete a chart showing things that sink and things that float.

Additional Notes:

Talk about ways to involve families in this activity. For example, a sink/float chart could be sent home to involve families in talking with children about science and helping children to document observations at home. Directions could be placed on the back providing parents with vocabulary and questions that they could use when talking with their child (for example, sink, float, buoyant, dense, tall, wide) in English as well as in their home language.

See Handout 2 for a sample sink/float chart.